

INFORMATION DISCLOSURE CITATION
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Docket Number (Optional)
98.046Application Number
S-1

Applicants

Sameer A. Khan and Aaron G. Dawson

Filing Date

Group Art Unit
593-21

06/13/00

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>JL</i>		4,969,130	11/6/90	Wason et al.	367	73	
<i>JL</i>		5,710,726	1/20/98	Rowney et al.	364	578	
<i>JL</i>		5,740,342	4/14/98	Kocberber	395	120	
<i>JL</i>		5,886,702	3/23/99	Migdal et al.	345	423	

OTHER DOCUMENTS (*Including Author, Title, Date, Pertinent Pages, Etc.*)

<i>JL</i>	P. Quandalle et al., "Reduction of Grid Effects Due to Local Sub-Gridding in Simulations Using a Composite Grid", Society of Petroleum Engineers, SPE 13527 (2/10-13/85); pp. 295-301, 8 Figs., 1 Appendix, 2 Tables.
<i>JL</i>	C. D. White et al., "Computing Absolute Transmissibility in the Presence of Fine-Scale Heterogeneity", Society of Petroleum Engineers, SPE 16011 (2/1-4/87); pp. 209-220.
<i>JL</i>	Sait Kocberber, "A Finite-Element Black Oil Simulation System for Heterogeneous Reservoirs With Horizontal Wells Having Vertical Hydraulic Fractures", Society of Petroleum Engineers, SPE 25269 (2/28/93 - 3/3/93); pp. 423-433.
<i>JL</i>	Sait Kocberber, "The Modeling of Deviated Wells and Sloping Faults With Locally Unstructured Grids: Part 1 - Gridding Aspects", Society of Petroleum Engineers, SPE 26506 (10/3-6/93); pp. 885-886.
<i>JL</i>	Sait Kocberber, "An Automatic Unstructured Grid Generation System for Geologically Complex Reservoirs", Society of Petroleum Engineers, SPE 28245 (07/31/94 - 08/03/94); pp. 225-240.
<i>JL</i>	Naji Saad et al., "Effective Relative Permeability in Scale-Up and Simulation", Society of Petroleum Engineers, SPE 29592 (03/20-22/1995); pp. 451-464.
<i>JL</i>	L. J. Durlofsky et al., "Scale Up of Heterogeneous Three Dimensional Reservoir Descriptions", Society of Petroleum Engineers, SPE 30709 , SPE Journal, September 1996; pp. 313-326.
<i>JL</i>	Jaedong Lee et al., "Development and Application of a New Upscaling Technique", Society of Petroleum Engineers, SPE 30712 , 10/22-25/95; pp. 89-101.
<i>JL</i>	Arun T. A. Kumar et al., "Impacts of Scale-up on Fluid Flow from Plug to Gridblock Scale in Reservoir Rock", Society of Petroleum Engineers, SPE/DOE 35452 , 04/21-24/96; pp. 517-532.
<i>JL</i>	Thomas A. Hewett et al., "Scale-Averaged Effective Flow Properties for Coarse-Grid Reservoir Simulation", Society of Petroleum Engineers, SPE 37988 , 06/8-11/97; pp. 127-135.
<i>JL</i>	D. Gunasekera et al., "The Generation and Application of K-Orthogonal Grid Systems", Society of Petroleum Engineers, SPE 37998 , 06/8-11/97; pp. 199-214.
<i>JL</i>	M. L. Litvak et al., "Integrated Reservoir and Surface Pipeline Network Compositional Simulations", Society of Petroleum Engineers, SPE 48859 , 11/02-06/98; pp. 297-305.
<i>JL</i>	Michael G. Edwards, "Split Tensor Operators Coupled with Quasi K-Orthogonal Grids", Society of Petroleum Engineers, SPE 51903 , 02/14-17/99; pp. 243-252.

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<i>M</i>	Yann Gautier et al., "Nested Gridding and Streamline-Based Simulation for Fast Reservoir Performance Prediction", Society of Petroleum Engineers, SPE 51931, 02/14-17/99; pp. 403-412.		
<i>Fy</i>	Koichi Suzuki et al., "Scale-Up of Relative Permeabilities of Isolated Gridblocks Accounting for Boundary Effects", Society of Petroleum Engineers, SPE 51938, 02/14-17/99; pp. 441-449.		
<i>Fy</i>	J. E. Warren et al., "Flow in Heterogeneous Porous Media", Society of Petroleum Engineers Journal, Sept. 1961; pp. 153-169.		
<i>M</i>	S. H. Begg et al., "Assigning Effective Values to Simulator Gridblock Parameters for Heterogeneous Reservoirs", SPE Reservoir Engineering, Nov. 1989; pp. 455-463.		
<i>Fy</i>	D. Li et al., "Global Scale-Up of Reservoir Model Permeability With Local Grid Refinement", Journal of Petroleum Science and Engineering 14 (1995); pp. 1-13.		
<i>Fy</i>	Dachang Li et al., "Scaleup of Reservoir-Model Relative Permeability With a Global Method", SPE Reservoir Engineering, August 1996; pp. 149-157.		
<i>Fy</i>	Donald W. Peaceman, "Effective Transmissibilities of a Gridblock by Upscaling-Comparison of Direct Methods with Renormalization", SPE Journal, Volume 2, SPE 36722, September 1997; pp. 338-349.		
<i>M</i>	Gillian E. Pickup, "Two-Phase Flow Upscaling for 3D Sedimentary Structures", 5th European Conference on the Mathematics of Oil Recovery, Leoben, Austria, 09/3-6/96; pp. 465-473.		
<i>M</i>	Xian-Huan Wen et al., "Upscaling Hydraulic Conductivities in Heterogeneous Media: An Overview", Journal of Hydrology 183 (1996); pp. ix-xxxii.		
<i>Fy</i>	M. A. Christie, "Upscaling for Reservoir Simulation", JPT, Nov. 1996; pp. 1004-1008.		
<i>M</i>	G. E. Pickup et al., "Permeability Tensors for Sedimentary Structures", Mathematical Geology, Vo. 26, No. 2, 1994; pp. 227-250.		
<i>M</i>	Xiao-Hui Wu et al., "Analysis of Upscaling Absolute Permeability", Computational Geosciences 0 (1998); pp. 1-21.		
<i>M</i>	Sait Kocberber, "An Automatic, Unstructured Grid-Generation System for Geologically Complex Reservoirs", SPE Computer Applications, October 1995; pp. 105-111.		
<i>M</i>	Dimitri J. Mavriplis, "Adaptive Mesh Generation for Viscous Flows Using Delaunay Triangulation", Journal of Computational Physics 90 (1990); pp. 271-291.		
<i>M</i>	S. Rebay, "Efficient Unstructured Mesh Generation by Means of Delaunay Triangulation and Bowyer-Watson Algorithm", Journal of Computational Physics 106 (1993); pp. 125-138.		
<i>M</i>	D. F. Watson, "Computing the η -Dimensional Delaunay Tessellation With Application to Voronoi Polytopes", The Computer Journal, Vol. 24, No. 2, 1981; pp. 167-172.		
<i>M</i>	H. Hin et al., "Generation of Unstructured Tetrahedral Meshes by Advancing Front Technique", International Journal for Numerical Methods in Engineering, Vol. 36 (1993); pp. 1805-1823.		
<i>Fy</i>	C. L. Palagi et al., "Use of Voronoi Grid in Reservoir Simulation", Society of Petroleum Engineers, SPE 22889 (10/06-09/1991); pp. 77-92.		
<i>Fy</i>	Yoram Rubin et al., "A Stochastic Approach to the Problem of Upscaling of Conductivity in Disordered Media: Theory and Unconditional Numerical Simulations", Water Resources Research, Vol. 26, No. 4 (April 1990) ; pp. 691-701		
EXAMINER <i>[Signature]</i>		DATE CONSIDERED <i>8/19/04</i>	
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

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*EXAMINER INITIAL <i>TS</i>	OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>		
<i>TS</i>	NIELSON, D.L. Rock Permeability in High-Temperature Geothermal Systems. Proceedings of the 32nd Intersociety Energy Conversion Engineering Conference, IECEC-97. 1997. Vol. 3. pages 1837-1839		
<i>TS</i>	HUANG et al. Y. An Improved Fuzzy Neural Network for Permeability Estimation from Wireline Logs in a Petroleum Reservoir. TENCON '96. Proceedings. 1996 IEEE TENCON. Digital Signal Processing Applications. Vol. 2. pages 912-917.		
<i>TS</i>	SILVER et al. D. Tracking Scalar Features in Unstructured Data Sets. Visualization '98. Proceedings. 1998. pages 79-86.		
		<i>RECEIVED</i> <i>NOV 3 0 2000</i> <i>Technology Center 2600</i>	
EXAMINER <i>TS</i>		DATE CONSIDERED <i>4/19/04</i>	

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